

AMENDMENTS TO THE CLAIMS

The following listing of the claims replaces all prior versions of the claims presented in the application.

1-13. (Cancelled)

14. (Previously presented) A method for inhibiting accumulation of amyloid β peptide in the brain of a patient suffering from Alzheimer's disease, comprising contacting in vivo soluble amyloid β peptide in the cerebrospinal fluid of said patient with an exogenous free-end specific antibody which is targeted to a free N-terminus of amyloid β peptide or a free C-terminus of amyloid β peptide A β 1-40, to inhibit the accumulation of said amyloid β peptide in the brain of said subject.

15-18. (Cancelled)

19. (Original) The method of claim 14, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

20. (Previously presented) A method for inhibiting the neurotoxicity of amyloid β peptide in a patient suffering from Alzheimer's disease, comprising contacting in vivo soluble amyloid β peptide in the cerebrospinal fluid of said patient with an exogenous free-end specific antibody which is targeted to a free N-terminus of amyloid β peptide or a free C-terminus of amyloid β peptide A β 1-40, to inhibit the neurotoxicity of amyloid β peptide in said subject.

21-24. (Cancelled)

25. (Original) The method of claim 20, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

26-54. (Cancelled)

55. (Previously presented) The method of claim 14, wherein the antibody is a monoclonal antibody targeted to the free N-terminus of amyloid β , wherein the first amino acid of said N-terminus is aspartate at position 1 of amyloid β -peptide.

56. (Previously presented) The method of claim 20, wherein the antibody is a monoclonal antibody targeted to the free N-terminus of amyloid β -peptide, wherein the first amino acid of said N-terminus is aspartate at position 1 of amyloid β -peptide.

57-71. (Cancelled)

72. (Previously presented) The method of claim 14, wherein the antibody is targeted to the free C-terminus of the amyloid β - peptide A β 1-40.

73-74. (Cancelled)

75. (Previously presented) The method of claim 20, wherein the antibody is targeted to the free C-terminus of the amyloid β - peptide A β 1-40.

76. (Cancelled)

77. (Previously presented) A method for inhibiting accumulation of amyloid β peptide in the brain of a patient suffering from Alzheimer's disease, comprising contacting in vivo soluble amyloid β peptide in the cerebrospinal fluid of said patient with an exogenous free-end specific antibody which is targeted to a free N-terminus of an amyloid β peptide fragment truncated at position 3, 11 or 17, to inhibit the accumulation of said amyloid β peptide in the brain of said subject.

78. (Previously presented) The method of claim 77 wherein said free-end specific antibody is specific for an amyloid β peptide fragment that begins with a pyroglutamate residue at position 3.

79. (Previously presented) The method of claim 77 wherein said free-end specific antibody is specific for an amyloid β peptide fragment that begins with a pyroglutamate residue at position 11.

80. (Previously presented) The method of claim 77, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

81-82. (Cancelled)

83. (Previously presented) A method for inhibiting the neurotoxicity of amyloid β peptide in a patient suffering from Alzheimer's disease, comprising contacting in vivo soluble amyloid β peptide in the cerebrospinal fluid of said patient with an exogenous free-end specific antibody which is targeted to a free N-terminal end of an amyloid β peptide fragment truncated at position 3, 11 or 17, to inhibit the neurotoxicity of amyloid β in said subject.

84. (Previously presented) The method of claim 83 wherein said free-end specific antibody is specific for an amyloid β peptide fragment that begins with a pyroglutamate residue at position 3.

85. (Previously presented) The method of claim 83 wherein said free-end specific antibody is specific for an amyloid β peptide fragment that begins with a pyroglutamate residue at position 11.

86. (Previously presented) The method of claim 83, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

87-92. (Cancelled)

93. (New) A method of obtaining an amyloid β -peptide-antibody complex which comprises forming a composition consisting essentially of:

(1) a monoclonal antibody, humanized antibody, chimeric antibody, bispecific antibody, artificial antibody, scFv antibody, F(ab) antibody, or a fragment of the foregoing types of antibodies, that specifically binds to an epitope within residues 1-5 of said amyloid β -peptide and which binds said amyloid β -peptide but does not significantly bind amyloid precursor protein,

(2) cerebrospinal fluid; and

(3) said amyloid β -peptide.

94. (New) The method of claim 93, wherein said antibody is a humanized antibody or fragment thereof.

95. (New) The method of claim 93, wherein said antibody is a chimeric antibody or fragment thereof.

96. (New) The method of claim 93 wherein said cerebrospinal fluid consists of cerebrospinal fluid of an individual suffering from Alzheimer's disease or having a predisposition to develop Alzheimer's disease.

97. (New) The method of claim 93 wherein said amyloid β -peptide-antibody complex is a soluble complex.

98. (New) The method of claim 96 wherein said amyloid β -peptide-antibody complex is a soluble complex.

99. (New) A method of obtaining an amyloid β -peptide-antibody complex which comprises forming a composition consisting essentially of:

(1) a monoclonal antibody, humanized antibody, chimeric antibody, bispecific antibody, artificial antibody, scFv antibody, F(ab) antibody, or a fragment of the foregoing types of antibodies, that specifically binds to an epitope within residues 34-40 of said amyloid β -peptide and which binds said amyloid β -peptide but does not significantly bind amyloid precursor protein,

(2) cerebrospinal fluid; and

(3) said amyloid β -peptide.

100. (New) The method of claim 99, wherein said antibody is a humanized antibody or fragment thereof.

101. (New) The method of claim 99, wherein said antibody is a chimeric antibody or fragment thereof.

102. (New) The method of claim 99 wherein said cerebrospinal fluid consists of cerebrospinal fluid of an individual suffering from Alzheimer's disease or having a predisposition to develop Alzheimer's disease.

103. (New) The method of claim 99 wherein said amyloid β -peptide-antibody complex is a soluble complex.

104. (New) The method of claim 102 wherein said amyloid β -peptide-antibody complex is a soluble complex.

105. (New) A method for reducing the quantity of amyloid β -peptide in the cerebrospinal fluid of a patient suffering from Alzheimer's disease which comprises contacting said amyloid β -peptide in said cerebrospinal fluid of said patient with a monoclonal antibody, humanized antibody, chimeric antibody, bispecific antibody, artificial antibody, scFv antibody, F(ab) antibody, or a fragment of the foregoing types of antibodies, that specifically binds to an epitope within residues 1-5 of said amyloid β -peptide and which binds said amyloid β -peptide but does not significantly bind amyloid precursor protein.

106. (New) The method of claim 105, wherein said antibody is a humanized antibody or fragment thereof.

107. (New) The method of claim 105, wherein said antibody is a chimeric antibody or fragment thereof.

108. (New) The method of claim 105 wherein said antibody binds amyloid β -peptide that is soluble in the cerebrospinal fluid of said patient.

109. (New) A method for reducing the quantity of amyloid β -peptide in the cerebrospinal fluid of a patient suffering from Alzheimer's disease which comprises contacting said amyloid β -peptide in said cerebrospinal fluid of said patient with a monoclonal antibody, humanized antibody, chimeric antibody, bispecific antibody, artificial antibody, scFv antibody, F(ab) antibody, or a fragment of the foregoing types of antibodies, that specifically binds to an epitope within residues 34-40 of said amyloid β -peptide and which binds said amyloid β -peptide but does not significantly bind amyloid precursor protein.

110. (New) The method of claim 109, wherein said antibody is a humanized antibody or fragment thereof.

111. (New) The method of claim 109, wherein said antibody is a chimeric antibody or fragment thereof.

112. (New) The method of claim 109 wherein said antibody binds amyloid β -peptide that is soluble in the cerebrospinal fluid of said patient.

113. (New) A method for inhibiting the accumulation of amyloid β -peptide in a patient suffering from Alzheimer's disease which comprises contacting said amyloid β -peptide in the cerebrospinal fluid of said patient in vivo with a monoclonal antibody, humanized antibody, chimeric antibody, bispecific antibody, artificial antibody, scFv antibody, F(ab) antibody, or a fragment of the foregoing types of antibodies, that specifically binds to an epitope within residues 34-40 of said amyloid β -peptide and which binds said amyloid β -peptide but does not significantly bind amyloid precursor protein.

114. (New) The method of claim 113, wherein said antibody is a humanized antibody or fragment thereof.

115. (New) The method of claim 113, wherein said antibody is a chimeric antibody or fragment thereof.

116. (New) The method of claim 113 wherein said antibody binds amyloid β -peptide that is soluble in the cerebrospinal fluid of said patient.

117. (New) A method for inhibiting the accumulation of amyloid β -peptide in a patient suffering from Alzheimer's disease which comprises contacting said amyloid β -peptide in the cerebrospinal fluid of said patient in vivo with a monoclonal antibody, humanized antibody, chimeric antibody, bispecific antibody, artificial antibody, scFv antibody, F(ab) antibody, or a fragment of the foregoing types of antibodies, that specifically binds to an epitope within residues 34-40 of said amyloid β -peptide and which binds said amyloid β -peptide but does not significantly bind amyloid precursor protein.

118. (New) The method of claim 117, wherein said antibody is a humanized antibody or fragment thereof.

119. (New) The method of claim 117, wherein said antibody is a chimeric antibody or fragment thereof.

120. (New) The method of claim 117 wherein said antibody binds amyloid β -peptide that is soluble in the cerebrospinal fluid of said patient.